

With respect to the latter, the applicants respectfully submit that the specification does not suggest that the any of the drawing figures are illustrative of the prior art. Accordingly, it is believed that it is not necessary to label any of the drawing figures as suggested by the Examiner. Note that in the Brief Description of the Drawings, reference is made to the invention and not to prior art. Accordingly, it is requested that the Examiner withdraw the objection.

The claims have been amended in order to overcome the Examiner's technical objections. The amendments herein are for such purpose and should not be considered as further limiting the claims. In claim 21, the magnetic circuit is recited positively and the core components are related thereto.

The Examiner rejected the claims over so called common knowledge and Elton 565. According to the Examiner, applicant describes the "typical public frequency" traction electrical supply system including transformer stations etc. The Examiner asserts that the art does not show details of the transformer winding. However, the Examiner asserts that Elton teaches a high voltage cable for dynamo-electric machines having plural strands, and semiconducting layers and a sold insulation therebetween.

The Examiner's rejection is respectfully traversed for the reasons set forth below.

Elton 565 does not teach the use of a high voltage cable as a winding in a rotating electrical machine. Elton on the contrary, teaches three separate applications for a pyrolyzed glass tape. The first application is for a conventional high current rotating machine which operates at relatively low voltage, as compared to transmission voltages. The second application is in a transmission power cable. There is no suggestion that the cable in Elton could be used as the winding in an rotating machine. Further, if such were attempted with the cable in Elton,

such attempt would fail because the cable in Elton is stiff and would not form a winding which would withstand high voltage. If the cable in Elton is bent so as to form a winding in machine, the glass layer would crack forming sites for corona discharge. Thus, contrary to Elton, corona discharge would not be prevented but would indeed be promoted. The third application is for an insulated housing which is irrelevant to the invention as well.

The claims depending from claim 1 which have been rejected are believed to properly recite functional attributes of the system. If one component of such a system supports patentability, the recitation of elements related to such system are believed to be proper. Applicants believe that the rejected claims depend from an allowable claim and are as such allowable. The prior art systems do not operate in a known way because they are not capable of high voltage operation as in the claimed system.

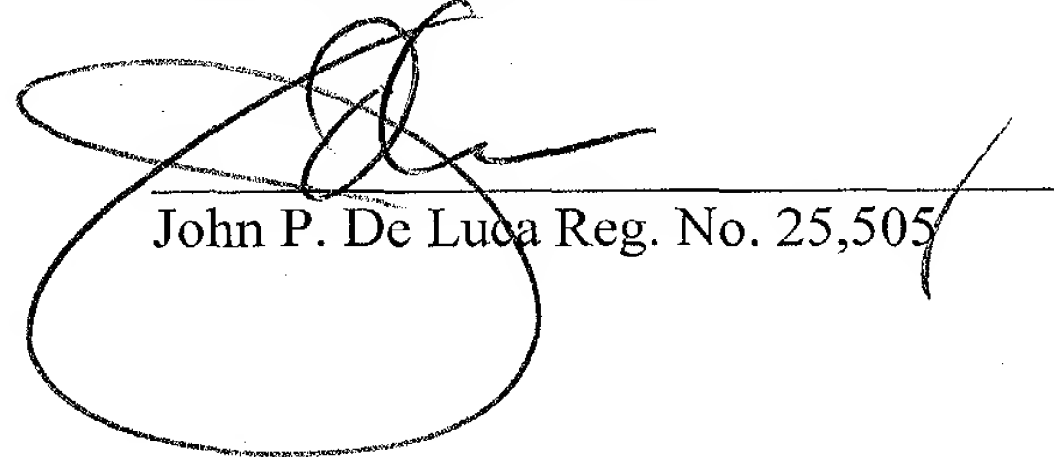
Takaoka, is a high voltage cable designed to overcome "skin effect" which is a problem with transmission cables caused by the rapidly changing field. Takaoka insulates the outer strands to reduce skin effect. In the invention some of the outer strands are uninsulated in order to contact the inner layer and thereby establish the equipotential surface. In the invention, the insulated strands which form a majority of the strands have an insulating surface, e.g. an oxide layer which minimizes current paths within the conductor. The insulation does not provide an insulation to ground, but provides insulation between the strands which operate at the same or nearly the same voltage. Takaoka operates to reduce a different phenomenon, namely skin effect, while the invention reduces eddy current paths while allowing the voltage of the conductors to be transferred to the inner semiconducting layer in order to establish an equipotential surface. These different phenomena are different, have different effects and are handled in a different.

In view of the foregoing it is respectfully requested that the Examiner reconsider his rejection of the claims , the allowance of which is earnestly solicited.

Attached is the marked up version made in the specification and claims.

If any additional fees are necessitated by this amendment including extension fees, it is requested that such extension be granted and the Commissioner is authorized to charge deposit account no. 04-2223 for any such fees.

Respectfully submitted,



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MARKED UP VERSION MADE IN THE SPECIFICATION.

Page 6, line 25, substitute the following paragraph:

The present invention provides an electricity supply system employing an electrical device having a winding with two semiconducting layers and an intermediate solid insulation forming equipotential surfaces [according to any one of the claims 1, 2, 6, 9, 11, 17, 18, or 19, each of which claims has an identical characterizing portion].

MARKED UP VERSION MADE IN THE CLAIMS

Claim 1. (Amended) An electricity supply system for traction, comprising a 3-phase high voltage distribution line, a transformer station connected to at least two of the three phases of the distribution line or to a [syrrimertrizing] symmetrizing device converting three phases to two phases, and having a transformer comprising a winding, and a traction supply line fed by the transformer station, wherein said winding includes insulation comprising at least two semiconducting layers, each layer providing a substantially equipotential surface, and solid insulation between said semiconducting layers.

Claim 12. (Amended) The system as claimed in claim [1] 11 wherein said rotating converter is asynchronous.

Claim 21. (Amended) The system as claimed in claim 1, including a magnetic circuit having flux paths in at least one of [the] a core of [a] the magnetic circuit [in the or each transformer or rotating converter] comprising at least one of laminated sheet plate, rough forged iron, cast iron and powder-based iron.